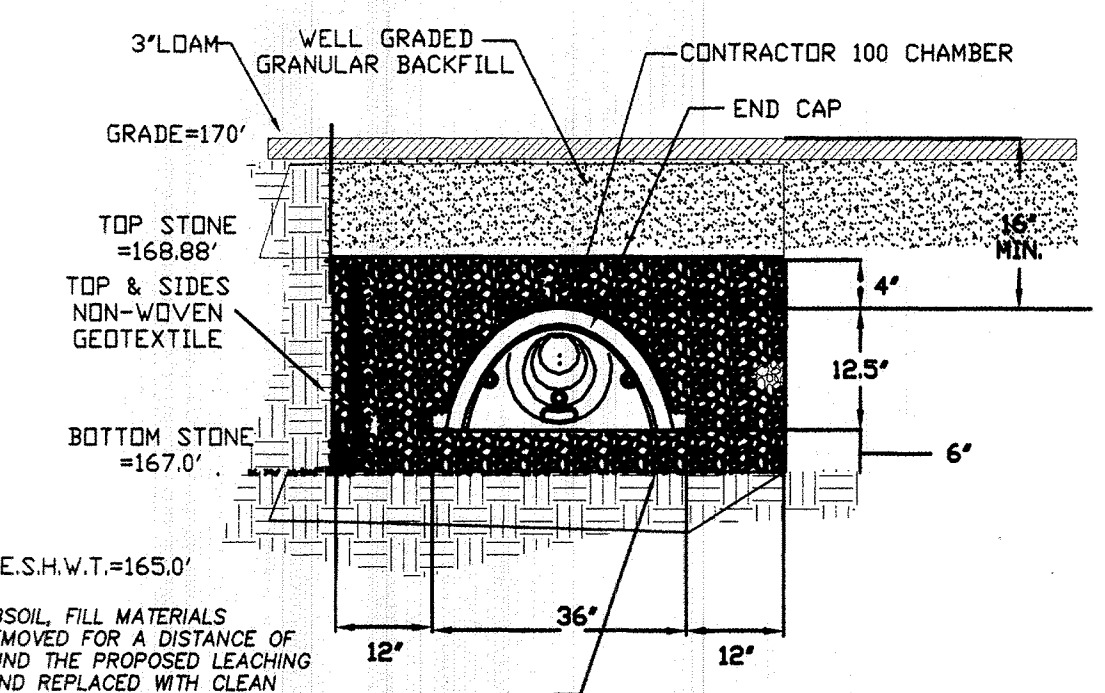
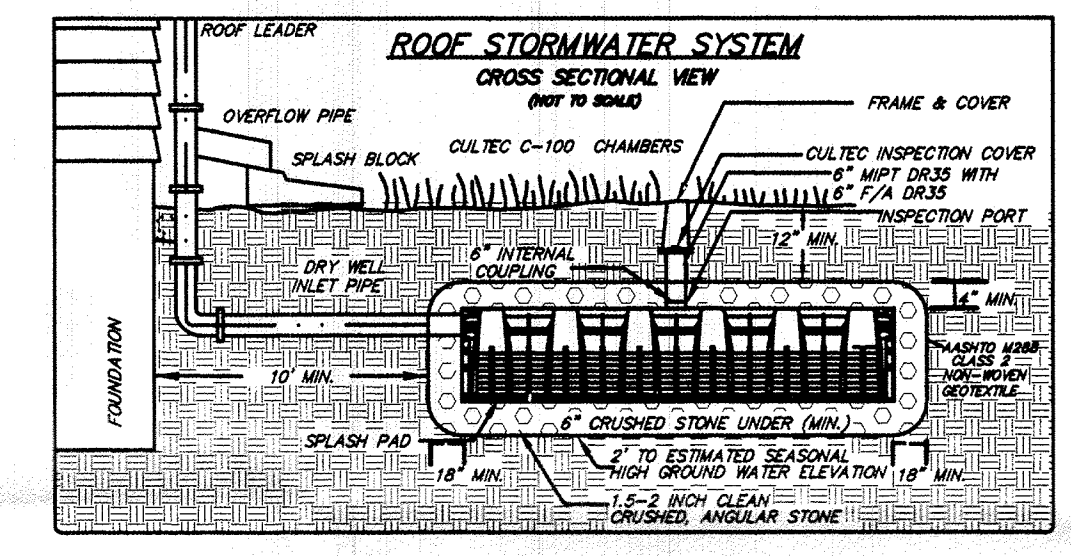
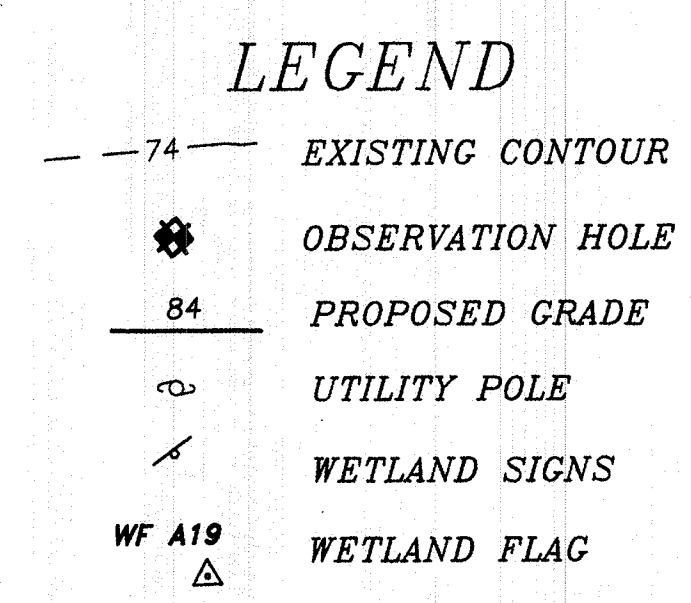


- NOTES:
1. VERTICAL DATUM IS FROM SUBDIVISION PLAN.
 2. CRUSHED STONE FILTER TO BE USED DURING CONSTRUCTION.
 3. PERIMETER DRAIN SHALL BE 4" P.V.C. WITH CRUSHED STONE AND FILTER FABRIC PAPER.
 4. AUTHORIZATION FROM THE HIGHWAY SUPERINTENDENT MUST BE RECEIVED PRIOR TO BACK FILLING (978)-374-2364.
 5. TRENCH BACK FILL SHALL BE PERFORMED UNDER THE INSPECTION AUTHORIZED CITY PERSONAL.
 6. WATER SERVICE TO BE CONNECTED PER CITY OF HAVERHILL SPECIFICATIONS.



CONSTRUCTION NOTES:

CONTRACTOR SHALL REMOVE ALL UNSUITABLE SOILS (A,B&FILL) IN AND 5 FEET AROUND PROPOSED LEACH AREA AND REPLACE WITH CLEAN GRANULAR SAND FILL IN COMPLIANCE WITH REGULATION 15.255 (3) - (6)

TABLE OF BUFFER ZONE ALTERATIONS

BUFFER ZONE:

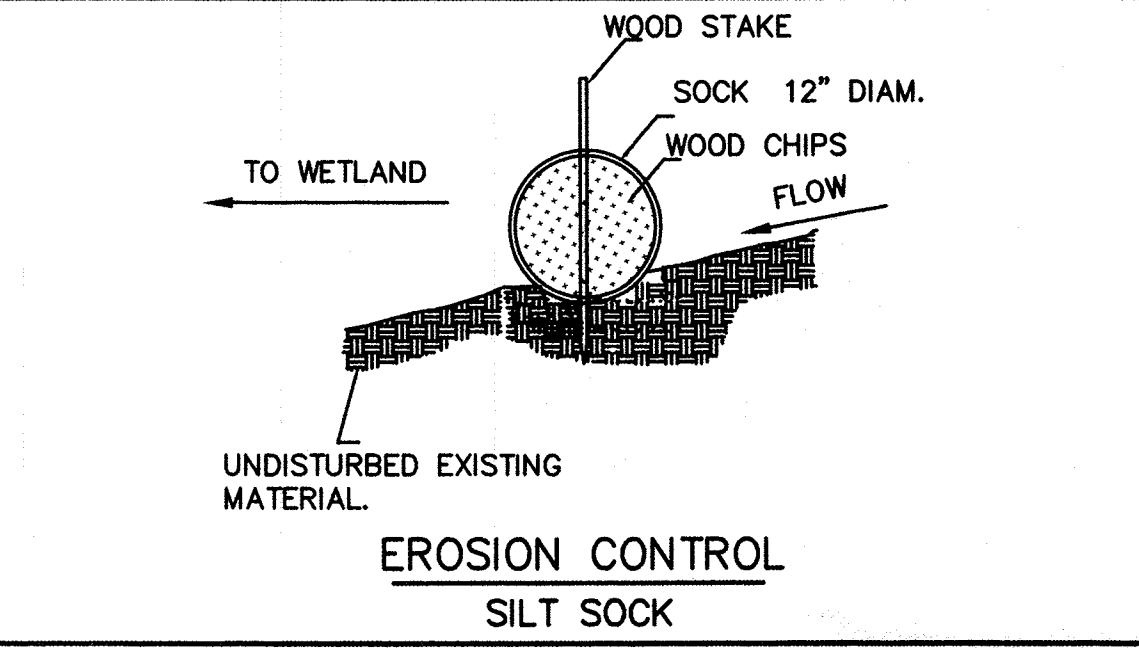
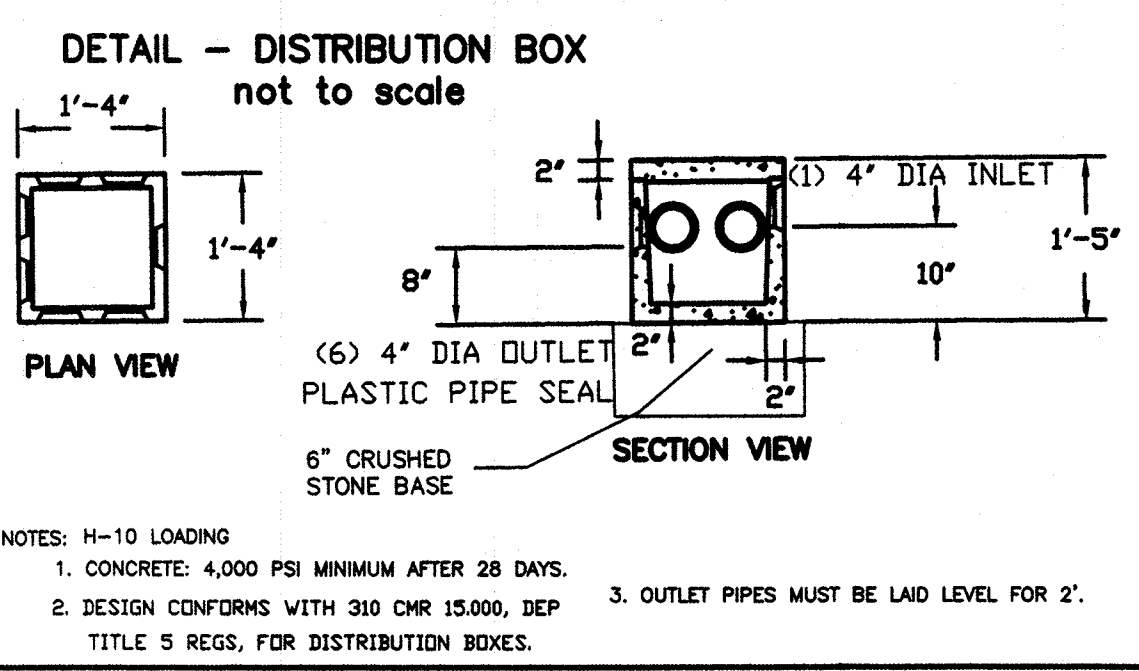
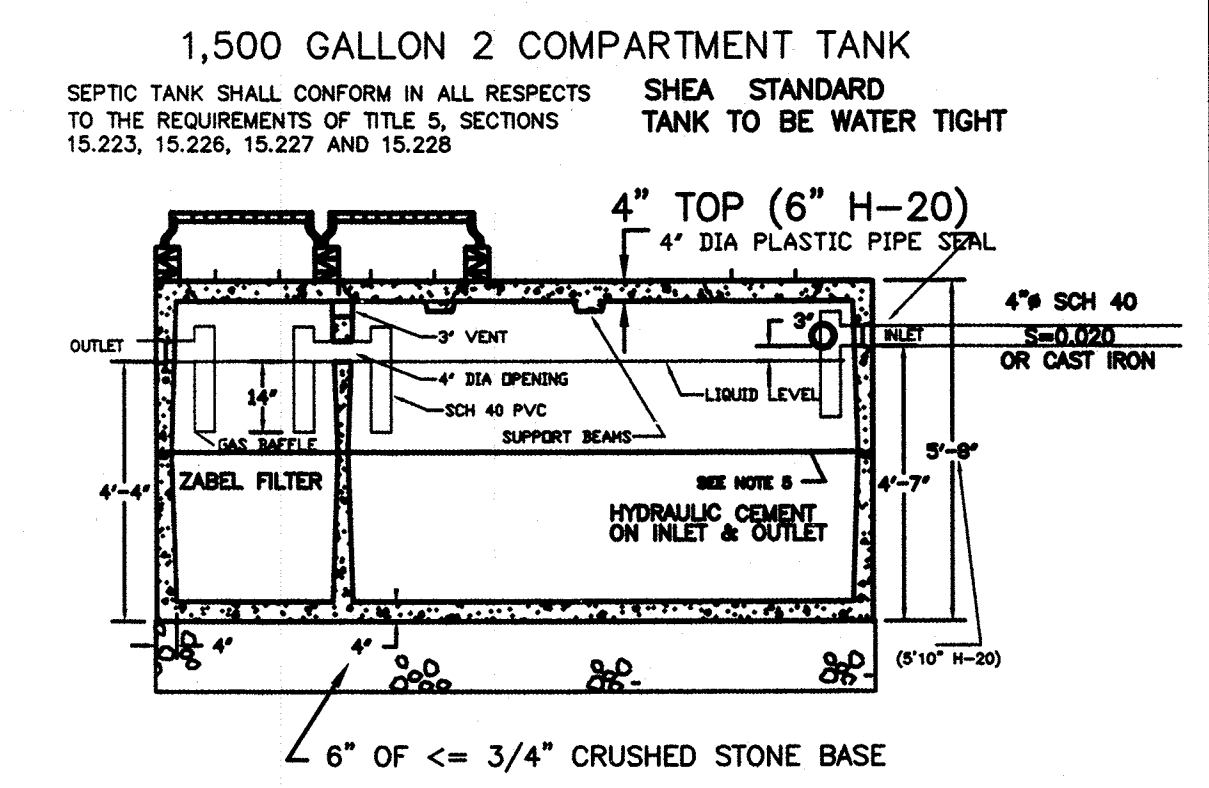
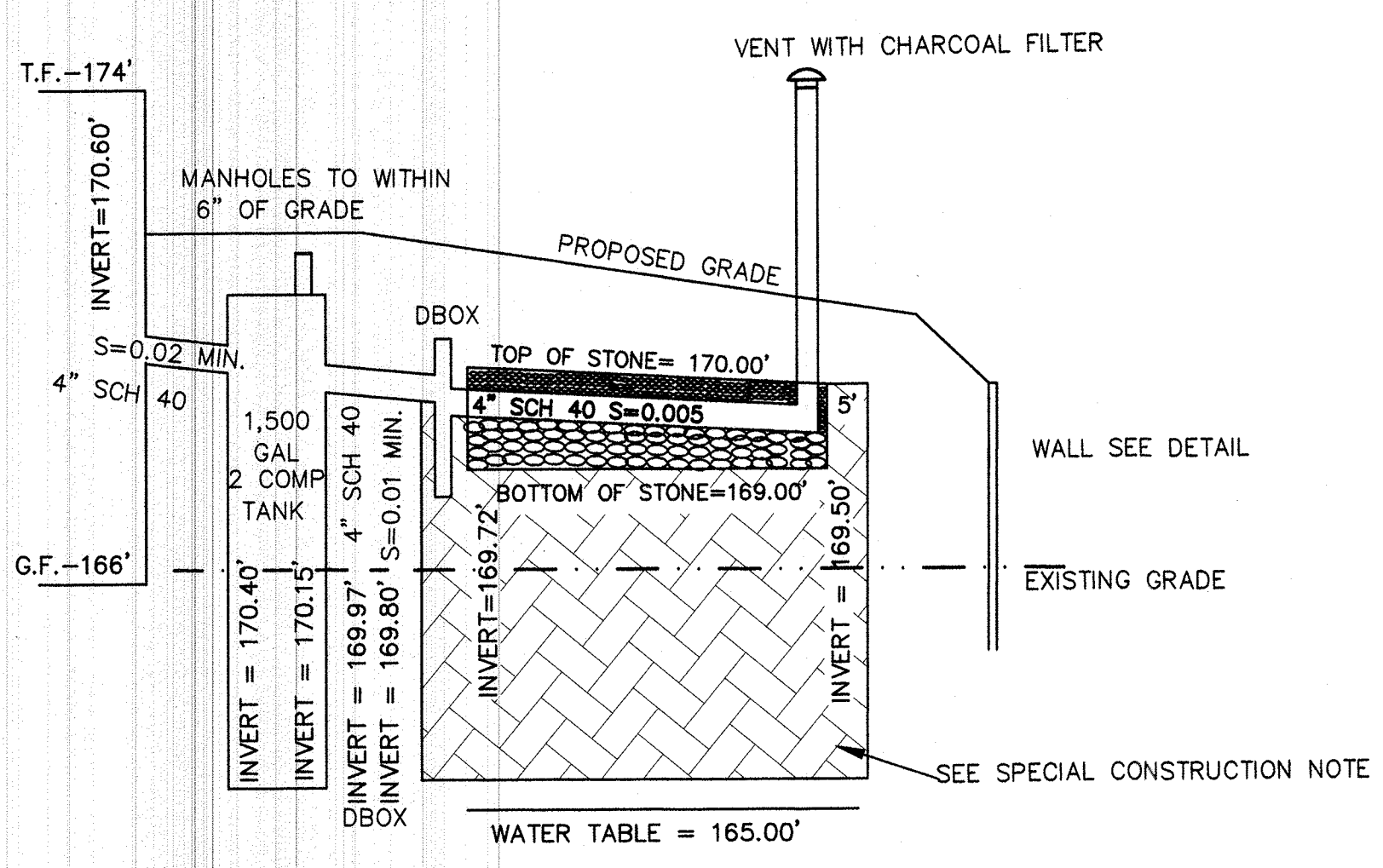
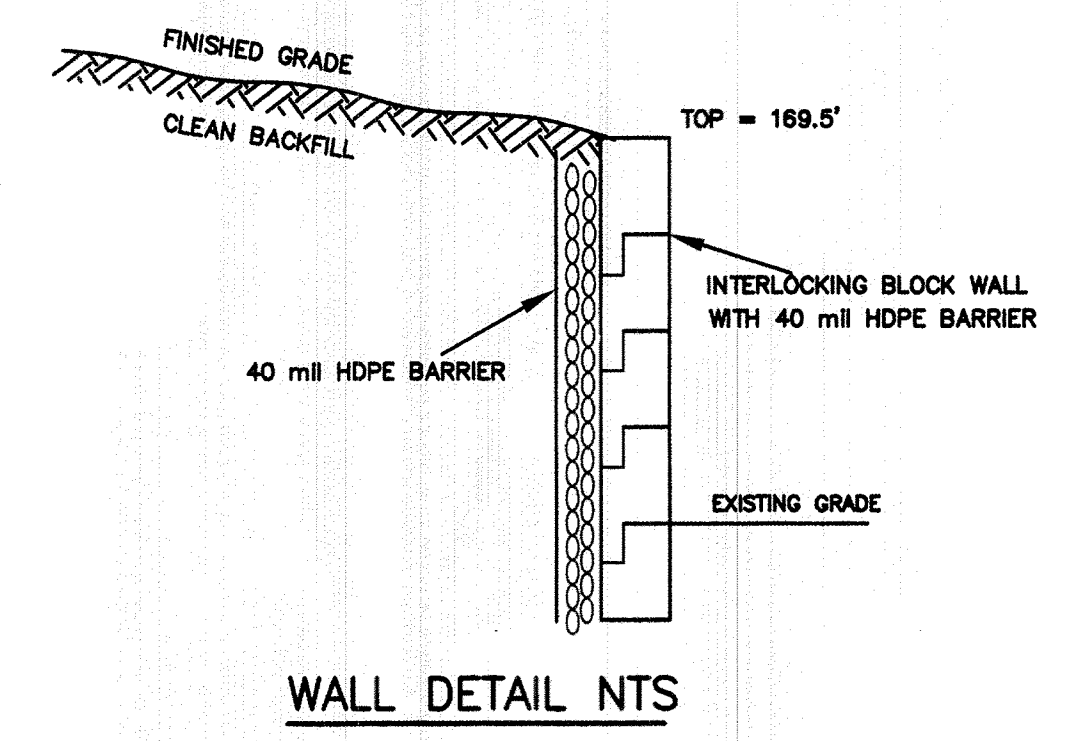
75'-100'	= 5,636 S.F.
35'-75'	= 4,973 S.F.
0'-35'	= 1,333 S.F.

I CERTIFY THAT ON 4/96 I HAVE PASSED THE EXAMINATION APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME CONSISTENT WITH THE REQUIRED, EXPERTISE AND EXPERIENCE DESCRIBED IN 310 CMR 15.018(2).

SOIL TEST DATA

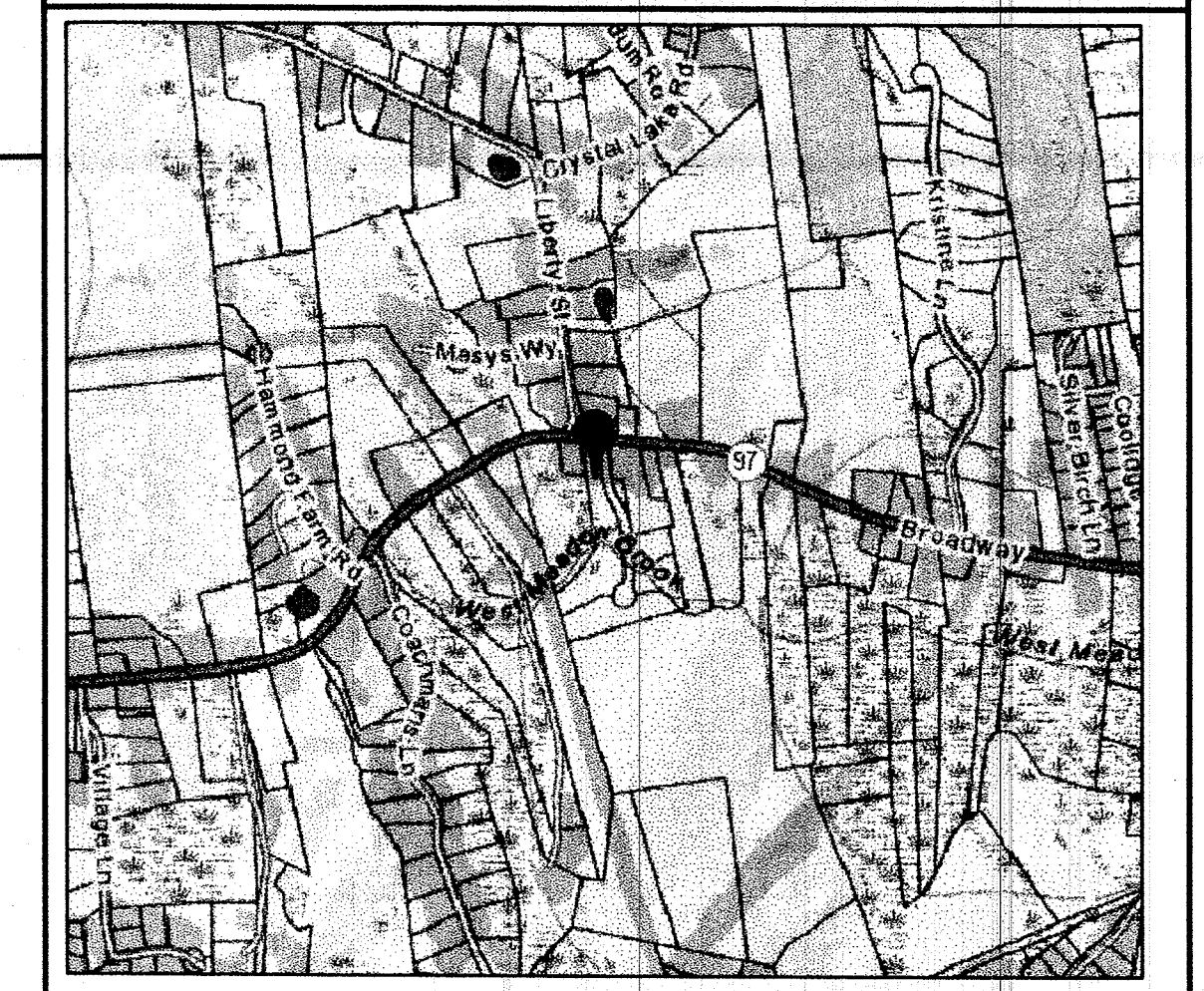
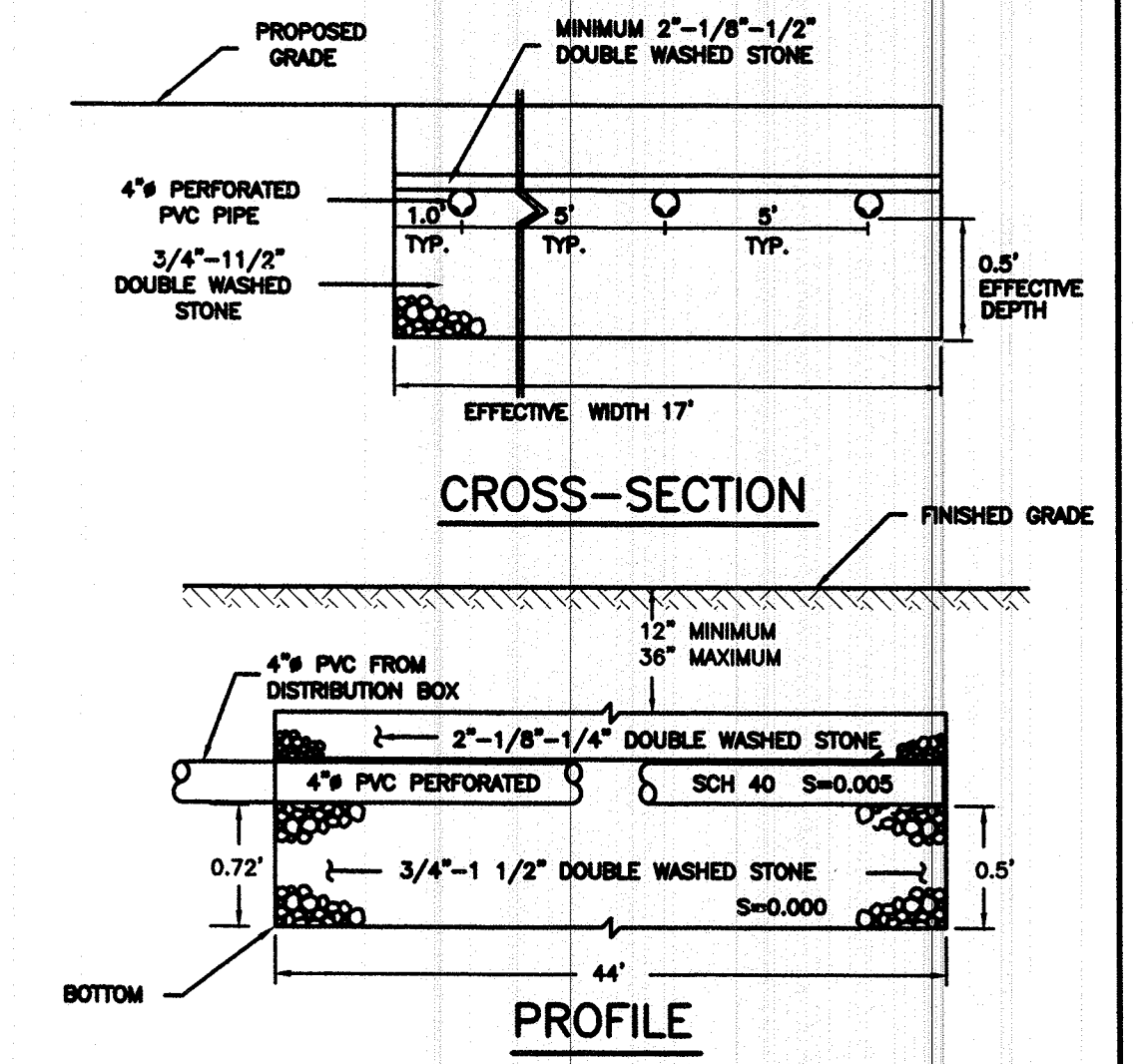
TESTS BY: GREG SAAB
WITNESS: LES GODIN
DATE: 11/25/15
PERCOLATION RATE(S): 8 & 10 MPI

DEEP HOLE # 5	DEEP HOLE # 6
0" Ap - FSL 168.0	0" Ap - FSL 168.0
10" BW-FSL 167.17	14" BW-FSL 167.71
30" MOTTLES 165.50	29" MOTTLES 165.58
36" C - LS 165.00	36" MOTTLES 165.00
2.5Y 7/1 7.5YR 5/8	2.5Y 7/1 7.5YR 5/8
C - LS 2.5Y 6/4	C - LS 2.5Y 6/4



- NOTES:
1. SAFETY MEASURES, DAY-TO-DAY CONTROL OF THE WORK AND CONSTRUCTION METHODS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 2. UNLESS SPECIFIED OTHERWISE HEREON, SYSTEM CONSTRUCTION SHALL CONFORM TO TITLE V OF THE STATE ENVIRONMENTAL CODE AND LOCAL BOARD OF HEALTH CODE.
 3. ANY INTENDED REVISION OF PROPOSED ELEVATIONS AND/OR HORIZONTAL LOCATIONS AS SHOWN HEREON SHALL BE APPROVED BY THE ENGINEER AND THE LOCAL BOARD OF HEALTH PRIOR TO IMPLEMENTATION.
 4. THIS PLAN IS FOR DESIGN AND CONSTRUCTION OF THE SEPTIC SYSTEM ONLY. PROPERTY LINES SHOW HEREON ARE APPROXIMATE.
 5. ALL WORK ON LINES, GRADES AND DETAILS SHOWN IS TO BE DONE BY A LICENSED "DISPOSAL WORKS INSTALLER." THE CONTRACTOR SHALL NOTIFY THE PROPER INSPECTORS AND ALLOW SUCH TIME AS IS REQUIRED FOR INSPECTIONS.
 6. ALL ERRORS, OMISSIONS AND CHANGE OF CONDITIONS AT THE SITE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PERFORMING THE RELATED WORK.
 7. NO WETLANDS ARE LOCATED WITHIN 50 FEET OF THE PROPOSED SEPTIC SYSTEM.
 8. THE SEPTIC TANK SHALL BE INSPECTED ANNUALLY AND PUMPED AS REQUIRED.
 9. WATER SAVER TOILETS AND SHOWER HEADS SHOULD BE USED WITH THE SYSTEM.
 10. THIS SYSTEM HAS BEEN DESIGNED FROM DATA REVIEWED AND ACKNOWLEDGED BY THE LOCAL BOARD OF HEALTH.
 11. THE ISSUANCE OF A CONSTRUCTION PERMIT AND/OR A CERTIFICATE OF COMPLIANCE SHALL NOT IMPLY AS A GUARANTEE THAT THE SUBSURFACE SEWAGE DISPOSAL SYSTEM WILL FUNCTION SATISFACTORILY.
 12. CONSTRUCTION OF LEACHING FACILITIES IN CLEAN GRANULAR FILL SHALL BE DEFINED IN THE STATE ENVIRONMENTAL CODE, TITLE V, REGULATION 15.255 & SHALL CONFORM TO THE GRADATION SPECIFIED IN 15.255(3).
 13. EXISTING TANK TO BE PUMPED AND CRUSHED PER TITLE V
 14. FINISH GRADE TO BE STABILIZED PRIOR TO ISSUANCE OF CERTIFICATE OF COMPLIANCE.
 15. NO PUBLIC WATER SUPPLY IS LOCATED WITHIN 400' AND NO TRIBUTARY TO PUBLIC WATER SUPPLY IS LOCATED WITHIN 200' OF LEACHING FACILITIES.
 16. ALL PLUMBING WORK WITHIN 10' OF HOUSE MUST BE DONE BY A LICENSED PLUMBER.
 17. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES BY CONTACTING DIG-SAFE AND MUNICIPAL UTILITIES PRIOR TO THE START OF EXCAVATION.

- DESIGN CRITERIA**
1. BUILDING TYPE: DWELLING
 2. NO. OF BEDROOMS: 4
 3. DESIGN FLOW: 4 x 110 GAL/BDRM/DAY = 440 GAL/DAY
 4. FIELD PERCOLATION RATE: 8 & 10 M.P.I.
 5. GARBAGE DISPOSAL: YES NO X
 6. EFFLUENT LOADING RATE: 0.60 GAL/DAY/SF
SOIL CLASS: II DESIGN PERCOLATION RATE: 10 MIN/INCH
 7. TOTAL LEACH AREA REQUIRED:
LOCAL CODE: 734 S.F. TITLE 5 734 SQ. FT.
PROVIDED: 748 SQ. FT.
BED: 17' X 44' = 748 SQ. FT.
BOTTOM: 748 SQ. FT. x 0.60 GAL/SQ. FT. = 448 GAL/DAY
TOTAL: 748 SQ. FT. OR 448 GAL/DAY
 8. LEACH AREA: 17 FOOT WIDE BY 44 FOOT
LONG LEACHING BED, VENTED



PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM

FOR: JAMES A. MAHONEY & SONS INC. RECEIVED
AT: EMMA ROSE CIRCLE (LOT 6) AUG 10 2016
HAVERHILL, MASSACHUSETTS
MAP 539 BLOCK 439 LOT 10E

DATE: AUGUST 8, 2016
SCALE: AS SHOWN
DWG: GCS
CHKD: C.A. MORIN, P.E.

ESS 70 Bailey Court
Haverhill, MA 01832
978.556.0284

NO.	DATE	REVISION